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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,377	04/30/2004	Ronald K. Maxwell	040168	3376

23464 7590 08/24/2005

BUCHANAN INGERSOLL, P.C.
ONE OXFORD CENTRE, 301 GRANT STREET
20TH FLOOR
PITTSBURGH, PA 15219

EXAMINER

ROST, ANDREW J

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/709,377		MAXWELL ET AL.	
	Examiner		Art Unit	
	Andrew J. Rost		3751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/03/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure includes minor errors. Line 4, replace "liner" with – linear --.

Correction is required. See MPEP § 608.01(b).

2. The disclosure includes the following informalities:

Paragraph [0004], line 3, replace "combustion by A" with – combustion by-products. A -- .

Paragraph [0005], line 5, replace "U.S.N o." with -- U.S. Patent No. –

Paragraph [0006], line 4, delete "a"

Paragraph [0009], line 12, replace "translated" with – translates –

Paragraph [0023], line 2, replace "closed" with – open –

Paragraph [0024], line 2, replace "open" with – closed –

Paragraph [0027], line 2, replace with – in Figure 2 and *in situ* installed in duct 2 in Figure 1 –

Paragraph [0034], line 5, replace "hub 18" with – hub 80 –

Paragraph [0039], line 8, replace "Figures 14 and 15." with – Figure 14.— Figure 15 is not present in application.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5-7, 9, 14, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer (2,509,161).

Regarding claims 1 and 15, Meyer discloses a plate (rack bar 10 in Figure 1) having parallel opposing edges with one edge having a toothed rack (11 in Figure 1) and a pinion wheel having pinion pins (22 in Figure 1) mounted on pinion wheel sides (face plates 23 and 24 in Figure 2) and the rotation of the pinion wheel will cause reciprocatory movement of the rack with resultant opening of closing movement (Column 3, line 61).

In regards to claims 5 and 17, Meyer discloses a pinion wheel with two wheel shaped pinion wheel sides (face plates 23 and 24 in Figure 2) in parallel relationship and pinion pins (22 in Figure 1).

In regards to claim 6, Meyer discloses the pinion pins spaced evenly around a radius (Column 3, line 4) about a hub (central opening 25).

In regards to claim 7, Meyer discloses cylindrical pinion pins (Figure 1).

In regards to claim 9, Meyer discloses the spacing and size of the pinion pins to be in accordance with the spacing and/or pitch of the teeth (Column 3, line 6).

In regards to claim 14, Meyer discloses the plurality of pinion pins to be inwardly offset from the outer edge of the pinion wheel faces (Figure 1).

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer.

In regards to claim 8, Meyer discloses pinion pins used in pinion wheels. Meyer does not disclose the composition of the pinion pins. Although the composition of the pinion pins is not mentioned by Meyer, the use of a metal base is well known in the art. It would have been obvious to one of ordinary skill in the art to manufacture the pins out of a metal base in order to produce a pinion wheel with a long usable life.

In regards to claim 13, Meyer discloses a plate with a toothed rack cut directly into the side. Meyer does not disclose the composition of the plate. Although the composition of the plate is not mentioned by Meyer, the non-corrosive metal is well known in the art. It would have been obvious to one of ordinary skill in the art to manufacture the plate out of a non-corrosive metal in order to produce a long lasting slide plate that would not be reactive to certain exhaust gases.

6. Claims 1-4, 10-12, 15, 16, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann et al. (4,327,893) in view of Meyer.

In regards to claims 1, 2, 15 and 16, Bachmann discloses a guillotine damper that has a plate with opposing parallel edges with racks on the opposing parallel edges and gears interacting with each rack. Bachmann does not have a toothed rack and pinion wheels with pinion pins. However, Meyer teaches a toothed rack cut directly into the plate along with pinion wheels constructed of pinion pins and wheel shaped faces for the purpose of creating opening and closing movement. Therefore, it would have been obvious to one of ordinary skill in the art to replace the gear system of Bachmann with the toothed rack and pinion wheels of Meyer in order to operate the sliding blade damper efficiently and with low maintenance costs.

In regards to claims 3, 4, 10-12, and 18-20, Bachmann discloses a motor mounted on one side of the bonnet (50 in Figure 3) that drives a shaft (51) that is connected to two actuators (gear boxes 52) that connect to the pinion wheels by use of a driven shaft (53) that extends through flexible joints (seals 54) (Column 4, line 34). The actuators (gear boxes 52) are located on each side of the bonnet and rotate the pinion wheels in opposite directions.

In regards to claim 21, Bachmann discloses a hook (60) holding the seal frame (58). When disconnected from the surrounding structure, the seal frame can be removed by means of the hook.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dreyer, et al. discloses an inflatable seal member for a sliding

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blade closure. Bachmann (4,163,458) discloses a sliding blade closure apparatus that utilizes a chain for opening and closing. Crawshaw discloses a sliding blade closure apparatus that uses rollers on both sides of the sliding blade. Maxwell (6,123,319) discloses a blade plate that has an adjustable seat and a pivotally connected blade plate. Maxwell (5,494,257) discloses an earlier version of the blade plate that has an adjustable seat and a pivotally connected blade plate. Bhide shows a valve capable for handling multiple gas pressures. Fox discloses a damper sealing structure that is operated by chains. Murphy discloses a water gate that reduces friction. Fortune discloses a slide gate valve that is operated by hand and the blade plate contains an opening for fluid passage. Woolley discloses a gate that contains an inflatable rubber seal that is inflated when in the proper position. Connor discloses a sliding blade closure that contains a purged area to inject pressurized fluid into the area and is operated by a chain. Marrero, et al. discloses a parking space barrier and indicator. McGee, et al. discloses a sliding valve that contains an opening in the plate that allows fluid to pass. Von Zweck discloses a gate valve for use in vacuum regions.

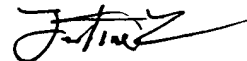
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:30-5 M-Th and 7:30-5 every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew J Rost
Examiner
Art Unit 3751



JUSTINE R. YU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

8/22/05